AMENDMENTS TO THE CLAIMS

Claims 1-14 (canceled)

15. (currently amended) A method of forming a magnetic tunnel junction element comprising:

forming a free ferromagnetic layer;

forming a pinned ferromagnetic layer,

forming a tunnel junction barrier layer between the free and pinned layers; and

forming ~~another~~ an offset ferromagnetic layer in flux communication with the pinned layer which reduces demagnetization coupling between the pinned ferromagnetic layer and the free ferromagnetic layer,

wherein the free ferromagnetic layer is arranged to align magnetically in either of two orientations with respect to the pinned ferromagnetic layer for storage of bit data.

16. (currently amended) A method as in claim ~~15~~ 22, wherein the pinning layer comprises a layer of at least one of IrMn and PtMn.

17. (original) A method as in claim 15, wherein at least one of the free and pinned layers comprises a layer of at least one of Co-Fe and Ni-Fe.

18. (original) A method as in claim 15, further comprising forming conductive layers in electrical contact with the free layer and the offset layer.

19. (currently amended) A method of forming a magnetic memory element comprising:

forming a free ferromagnetic layer;

forming a pinned ferromagnetic layer;

forming a tunnel junction barrier layer between the free and pinned layers;

forming an antiferromagnetic layer for pinning the pinned layer; and

forming another ferromagnetic layer on a side of said antiferromagnetic layer which is opposite a side ~~forming~~ on which said pinned layer is formed, said another ferromagnetic layer receiving flux coupling between said free and pinned layers,

wherein the free ferromagnetic layer is arranged to align magnetically in either of two orientations with respect to the pinned ferromagnetic layer for storage of bit data.

20. (new) A method as in claim 15, wherein the free ferromagnetic layer is formed such that a magnetic domain of the free layer orients in either a parallel or an antiparallel orientation with respect to a magnetic domain of the pinned layer.

21. (new) A method as in claim 15, wherein the offset ferromagnetic layer and the free antiferromagnetic layer are formed such that a magnetic domain orientation

axis of the offset ferromagnetic layer is substantially coplanar with a magnetic domain orientation axis of the free layer.

22. (new) A method as in claim 15, further comprising forming a pinning layer to pin the pinned ferromagnetic layer.

23. (new) A method as in claim 22, wherein the pinned layer is formed adjacent the antiferromagnetic layer.

24. (new) A method as in claim 22, wherein the pinned layer is pinned only by the antiferromagnetic layer.

25. (new) A method as in claim 19, wherein the pinned layer is pinned without a synthetic antiferromagnet.

26. (new) A method as in claim 19, wherein the free layer is arranged such that a magnetic domain of the free layer orients in either a parallel or an antiparallel orientation with respect to a magnetic domain of the pinned layer.

27. (new) A method as in claim 19, wherein the free and the another ferromagnetic layers are arranged such that a magnetic domain orientation axis of the another ferromagnetic layer is substantially coplanar with a magnetic domain

orientation axis of the free layer.

28. (new) A method as in claim 19, wherein the pinned layer is arranged adjacent the antiferromagnetic layer.

29. (new) A method as in claim 19, wherein the pinned layer is pinned only by the antiferromagnetic layer.

30. (new) A method as in claim 19, wherein the pinned layer is pinned without a synthetic antiferromagnet.